

**ABSTRACT OF THE DISCLOSURE**

The amount of RF power supplied to a plasma in a vacuum plasma processing chamber is gradually changed on a preprogrammed basis in response to signals stored in a computer memory. The computer memory stores signals so that other processing 5 chamber parameters (pressure, gas species and gas flow rates) remain constant while the gradual change occurs. The stored signals enable rounded corners, instead of sharp edges, to be etched, e.g., at an intersection of a trench wall and base.